Table 1-1: Global atmospheric concentration (ppm unless otherwise specified), rate of concentration change (ppb/year) and atmospheric lifetime (years) of selected greenhouse gases

Atmospheric Variable	**CO_2**	**CH_4**	**N_2O**	**SF_6[a]**	**CF_4[a]**
Pre-industrial atmospheric concentration	280	0.722	0.270	0	40
Atmospheric concentration[b]	370.3	1.842	0.316	4.7	80
Rate of concentration change[c]	1.5[d]	0.007[d]	0.0008	0.24	1.0
Atmospheric Lifetime	5-200[e]	12[f]	114[f]	3,200	>50,000

Source: Current atmospheric concentrations for CO_2, CH_4, N_2O, and SF_6 are from Blasing and Jones (2002). All other data is from IPCC (2001).

[a] Concentrations in parts per trillion (ppt) and rate of concentration change in ppt/year.

[b] Concentration for CO_2 was measured in 2001. Concentrations for all other gases were measured in 2000.

[c] Rate is calculated over the period 1990 to 1999.

[d] Rate has fluctuated between 0.9 and 2.8 ppm per year for CO_2 and between 0 and 0.013 ppm per year for CH_4 over the period 1990 to 1999.

[e] No single lifetime can be defined for CO_2 because of the different rates of uptake by different removal processes.

[f] This lifetime has been defined as an “adjustment time” that takes into account the indirect effect of the gas on its own residence time.